

## SUBJECT INDEX

Academic performance  
 cognitive regulatory activity and intelligence 85  
 orienting and self-judging 530, 532–536

Adult-child interactions, pre-school, constructing activity 19–35

Affective learning activities 261

AGO model 435

AH-test 81

Analytic teachers, writing 210–221

Argumentative writing/reading 115, 117–134

Attention, learning strategies 169

AVOW Tutor 311–314, 319–323, 421

CARROLL system 379–388

Causal network model 38

Closed CITO Text Comprehension Test 44–55

Cognition  
 control of 519, 522  
 graphing 235–253

Cognitive development, sociocultural model 493–515

Cognitive learning processes 259, 260

Cognitive load, school writing 189–207

Cognitive processing, peer interactions 455, 457, 458, 461–471

Cognitive regulatory study activity 80, 82  
 relationship with intelligence 82–89

Cognitive strategies, achievement in secondary mathematics 429–446

Cognitive style, individual differences 356

Communicative strategies 461, 464, 469

Comprehension problem detection in revising 143–164

Computer-assisted instruction, Tarski's World 331

Computer Assisted Study Environment(CASE), study strategies 285–300

Computer-based learning 303–306, 419–424  
 Law Encoding Diagrams 309–324

Conation 518, 519, 526

Concentration, learning strategies 170, 175, 178, 180

Conceptions of learning 477, 481, 482, 484

Conceptual knowledge 64

Constructing activity, adult-child interactions 23–35

Construction-integration model 40

Constructionist theories, text comprehension 40, 53

Constructivity 3

Cooperative learning, strategy instruction 428, 435–446

Craft-knowledge, teachers 71

Crystallized intelligence 79, 84

Decontextualisation 65

Deep processing 2, 283–300  
 conflicting information 60, 64

Developmental situativity theory 328–330

Diagram-based systems 303, 419  
 external representations 348, 350  
 Law Encoding Diagrams 309–324  
 software applications 369

Diagrammatic intelligence, cognitive regulatory activity 84

Diagrammatic reasoning 34

Disciplinary differences, learning styles, vocational education 476, 478, 483, 487

Discourse analysis 500

Dissonant study orchestrations 6, 14, 15

Document consultation, writing 198

Drafting strategies 97, 100

Dual-coding theory 368

Dynalinking 423

Early literacy 543–562

Emergence 304

Emotions 523

Epistemological development 2

Euler system 369, 377–388, 404–408

Executive regulation 78–89

Expertise 67

Exploratory talk 495–498  
 evaluation 502, 507–514  
 intervention programme 499, 507

Expressiveness, graphical representations 392–397

Externalisation  
 problem solving 353  
 representation 350  
 self-explanation effect 351

External representations 343–360, 423  
 distributed problem solving 411–417  
 individual differences 355

properties 348  
 self-constructed versus pre-fabricated 347  
 semantic properties 350

Far-near transfer 62, 65, 67  
 Fluid intelligence 79

Gender, learning strategies 180  
 Generative writing 100, 101  
 Globalistic teachers, writing strategies 210–221  
 Graphical representations, interactive 303, 419  
     developmental situativity theory 330  
     external representations 343–360, 411–417, 423  
     information enforcement and learning 365–388  
     Law Encoding Diagrams 309–324  
     modality assignment 391–408  
     Tarski's World 327, 331–340, 376–388

Graphing 235–253  
 Group orchestration 5  
 Groupwork, achievement in secondary mathematics 428, 435  
 Guided participation 32

Higher education, trainable learning tools 517–539  
 Higher order knowledge 65  
 Human problem solving, graphical representations 348, 353  
 Human reasoning 329  
 Hyperproof 377  
     logic teaching 397–401

Individual development, social reasoning 494, 495, 512  
 Individual differences, external representation 355–359  
 Inductive learning 331  
 Inexpression 304  
 Inferencing causal relations, text comprehension 37–55  
 Inferential skills training programmes 41  
 Instructional-learning episodes 57, 60–71  
 Intelligence 78  
     cognitive regulatory activities 82–89  
     relationship with metacognitive skills 79  
 Intentional cognition, development of, writing 95  
 Interactive graphical systems 303–306, 419  
     developmental situativity theory 330  
     external representations 343–360, 411–417, 423  
     information enforcement and learning 365–388

Law Encoding Diagrams 309–324  
 modality assignment 391–408  
 Tarski's World 327, 331–340, 376–388  
 Inventory of Learning Styles(ILS) 80, 286  
 Inventory of Learning Styles for Secondary Vocational Education 483  
 Isoclines 236, 241, 244

Knowledge-skill 61  
 Knowledge systems, teachers 58  
 Knowledge-telling strategy, writing 95  
 Knowledge-transforming strategy, writing 95

Language, peer group interaction 453–471  
 Law Encoding Diagrams(LEDs) 304  
     interactive instruction with 309–324, 413, 416–421

Learning  
     interactive graphical representations 303–424  
     social interaction 428, 451  
     theoretical constructs 2  
 Learning-by-doing, writing 109, 115, 123, 132  
 Learning-by-observation, writing 112–141  
 Learning environment  
     problem solving in higher education 523  
     study success 4–16  
 Learning goal knowledge system 58  
 Learning outcomes, instructional-learning episodes 61–71  
 Learning skills, higher education 517–539  
 Learning strategies 169, 264  
     in computer assisted study environment 281–300  
 Learning styles 264, 274  
     computer-assisted study environment 282–300  
     secondary vocational education 475–490  
 Learning/teaching theories 257–277  
 Learning tools 519  
     orienting and self-judging 526–539  
 Lectures, graphical representations 242  
 Leuven Executive Regulation Questionnaire(LERQ) 80, 82  
 Locality 303  
 Logic teaching, graphical representations 377  
     Hyperproof 397  
     modality assignment 391–408  
     Tarski's World 331–338

Mathemagenic/mathematical effects 270, 271  
 Mathematics, secondary, social and cognitive strategy instruction 427–448  
 Mathematics Reasoning Ability Test 434–446  
 Meaning-oriented students, study success 3, 5, 9–16  
 Media selection 366

Medical students, study practices and success 1–16

Mental representation 3

Metacognition

- orienting and self-judging 528, 536
- performance in higher education 518–525

Metacognition-cognition, intelligence and academic performance 78–89

Metacognitive regulation of learning 262

Metacognitive skills, relationship with intelligence 70

Modality assignment, the picture in logic teaching 391–408

Motivational orientations 477, 481, 482, 484

MT Reading Comprehension Test 148, 159

Near transfer 62, 66

Notational systems 310, 318–321

Numerical intelligence, cognitive regulatory activity 84

Observation, learning to write 112–141

Observation-of-models 112, 132

Orchestrations, study success 4

Orientations to studying 3–16, 262, 283, 292, 476

Orienting 519, 521, 525, 536–539

- definitions 526
- interventions 526
- metacognitive knowledge 528
- performance 530, 532–536
- transfer 529

Outline strategies 97, 100

Peer group interaction

- achievement in secondary mathematics 429–446
- situated dynamics, analytic framework 449–471

Persistence, learning strategies 170, 175, 178, 180

Personality, learning strategies 169, 175, 178, 180

Phenomenology 240, 243

Planning 521

Playgroups, adult-child interactions 21

Pre-school playgroup, adult-child interactions 19–35

Primary education, exploratory talk 495–515

Prior knowledge 284, 289, 293

- individual differences 355

Problem solving

- social and cognitive strategy instruction 427–446
- trainable learning tools 518, 521, 526

Processing strategies 477

vocational education 480, 484

Process-oriented teaching 265, 273–275

Productive learning 64–66

Punctuation development in children 543–562

Q-sort, instructional strategies for teaching to write 212–221

Raven's Progressive Matrices 148, 159, 498, 501–513

Reader protocol method 145, 151

Reader's mental model 147

Reading, learning to write by observation 109–141

Reading ability, indicators 137

Reading speed 289, 293

Reading and thinking aloud test 44–55

Reasoning

- expressiveness 396
- external representations 343–360
- interactive graphical systems 369
- social interaction 493–515

Reflection 521, 523

- learning strategies 170, 175, 178

Reflective cognitive change 57–73

Regulation activities 170, 477

- academic performance in higher education 78–89
- learning processes 258, 270, 276
- learning to write 110
- study success 2–16
- vocational education 480, 482, 484

ReMIS-CL 313, 315–323

Representation, graphing 235–253

Representation strategies 429, 430

Reproduction-oriented students, study success 3, 5, 9–16

Reproductive-productive learning 61, 63, 66

Revision of text, writing 99

- comprehension problems 143, 154, 157, 162, 163

Rough drafting 97, 100

Routines 66

Scaffolding, preschool playgroup 30, 32

Science, graphing 235

Self-explanation, externalisation 351

Self-judging 519, 522, 525, 536–539

- definitiuon 526
- interventions 526
- metacognitive knowledge 528
- performance 530, 532–536
- transfer 529

Self-observation, learning to write 110, 112

Self-regulation 2, 68, 170, 258, 264, 270, 276, 518–520

Semantic analysis, teaching outcomes 391–408  
 Semiotics 240, 243  
 Sequencing 524  
 Situated cognition, Tarski's World 328  
 Situated learning, Tarski's World 331  
 Situation theory 304  
 Situativity-in-Domain 331–338  
 Social and cognitive strategies, achievement in secondary mathematics 428–446  
 Social interaction and learning 451  
 Social nature of writing 98, 231  
 Social processing, peer interactions 455, 457, 458, 461–471  
 Social reasoning 495–515  
 Spatial representation 349  
 Specificity logic 367  
 Spelling, in complex text production 192, 195, 197–204  
 Strategies  
   in computer assisted study environment 281–300  
   learning 264  
   teacher-regulation 266–269  
   teaching and learning writing 93–107  
   cognitive and social processes 229–233  
   detection of comprehension problems 143–164  
   instruction, Q-sort analysis 209–221  
   management of cognitive load 189–207  
   observation 109–141  
   research 223–227  
   tasks and process/product variables 167–185  
 Strategy instruction, achievement in secondary mathematics 428–448  
 Student-regulation of learning processes 258, 270–277  
 Study strategies in computer assisted study environment 281–300  
 Study practices, related to success 1–16  
 Success, study practices 3, 7–16  
 Surface approach to learning 2  
 Surface processing 283–300  
 Syllogisms  
   model theory 403  
   representations for teaching 401  
 Syllogistic reasoning 369  
 Symbols and thought 329  
 Syntactic manipulations of representation 319  
 Systematic practice 67  
 Talk, cognitive development 494–515  
 Tarski's World 305, 327, 331–338, 369, 372, 376–388  
 Task-specific strategies, writing 170–185  
 Teacher-regulation of learning processes 264–277  
 Teachers, instructional-learning episodes 58–71  
 Teaching/learning theories 257–277  
 Teaching strategies, writing, Q-sort 209–221  
 Text comprehension 144  
   inferencing causal relations 37–55  
 Think-aloud reading protocols 145, 146, 149, 151  
 Thinking aloud 39, 44  
 Training  
   inferential skills, text comprehension 41–55  
   social and cognitive strategies 430  
 Transfer 524  
   learning-by-observation 113, 115, 116, 122, 128, 130  
   orienting and self-judging 529, 533, 536, 537  
 Translations between notational systems 319  
 Venn diagram 303, 419  
 Venn system 369, 371, 376–388, 404–408  
 Verbal intelligence, cognitive regulatory activities 82  
 Verbal interactions, peer groups 453–471  
 Visualisers/verbalisers 357  
 Visuospatial sketchpad 348  
 Vocational education, learning styles 475–490  
 Vygotsky 329  
 Working memory  
   graphical representations 348  
   writing 190  
 Writing ability, indicators 135  
 Writing ability test 155  
 Writing, effective strategies for teaching and learning 93–107  
   cognitive and social processes 229–233  
   detection of comprehension problems 143–164  
   instruction, Q-sort analysis 209–221  
   management of cognitive load 189–207  
   observation 109–141  
   research 223–227  
   task and process/product variables 167–185  
 Written narrative, punctuation development 543–562

